OBN MEDIA TECHNOLOGY SPECIAL EDITION

Media Complex Inauguration – 2026

FROM CASSETTE TO CLOUD

The Digital Transformation of Oromia Broadcasting Network

How Automation, Centralized Storage, and Intelligent Workflows

Reshaped OBN into a Modern Multi-Platform Media Institution

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🎤 *A Special Publication Presented at the Official Inauguration of the OBN Media Complex*

Inside the Technological Transformation of Oromia Broadcasting Network (OBN)

There was a time when a single cassette could determine whether the evening news would air.

Editors waited patiently beside humming tape machines. Programs were assembled manually one button press at a time. If a tape jammed, a broadcast could be delayed. If an archive was needed, someone had to physically search shelves of labeled cassettes.

Today, hundreds of terabytes of digital media move across Oromia Broadcasting Network (OBN) in seconds.

What changed is not only the equipment but the entire philosophy of broadcasting.

The Foundation: When Broadcasting Was Mechanical

During the early STVO era, production at OBN was entirely linear. Editing meant physically playing footage from one tape machine while recording it onto another. Precision mattered. Timing mattered. Discipline mattered.

Every edit was final. Every mistake meant starting again.

This system was slow and costly, but it built a culture of technical rigor. Engineers and editors learned to respect workflow discipline, signal flow, and broadcast timing at the most fundamental level.

Archive image of old tape machines or linear editing setup.

Tape Era vs Digital Era Comparison

Era	Editing Method	Storage Type	Retrieval Process	Collaboration Level	Risk Level
STVO (Tape Era)	Linear tape-to-tape editing	Physical cassettes	Manual search & replay	Single-user	High
DhRTVO (Hybrid Era)	Software editing + tape output	Local PC storage + tapes	Manual archive retrieval	Limited	Moderate
Modern Avid Era	Non-linear digital editing	Centralized shared storage (NEXIS)	Automated archive & metadata search	Multi-user collaborative	Low

This table visually demonstrates the rise in efficiency.

The Transitional Era: Digital, But Not Yet Free

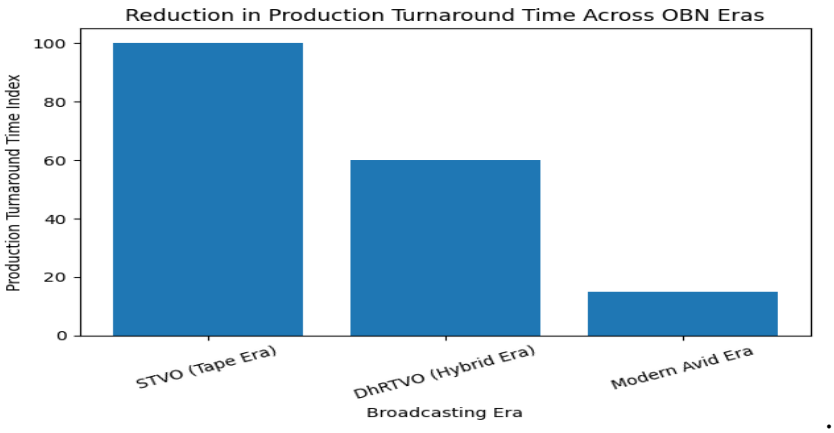
With the DhRTVO phase came computers and hope.

Editing moved to software platforms such as **Sony Vegas** and **Adobe Audition**. But tapes were still part of the process. Footage had to be captured into the system. Final output had to be printed back to tape.

The newsroom had modern tools but the workflow remained partially trapped in the past.

Storage was limited. Archiving was manual. Retrieving old programs required physically locating tapes in storage rooms. Productivity improved, yet scalability remained constrained.

Bar graph showing production time reduction from STVO → DhRTVO → Modern Avid Era.



This visual quantifies progress

The Breakthrough: Enter the Tapeless Era

The real revolution began with the adoption of the Avid Tapeless Workflow (ATWF).

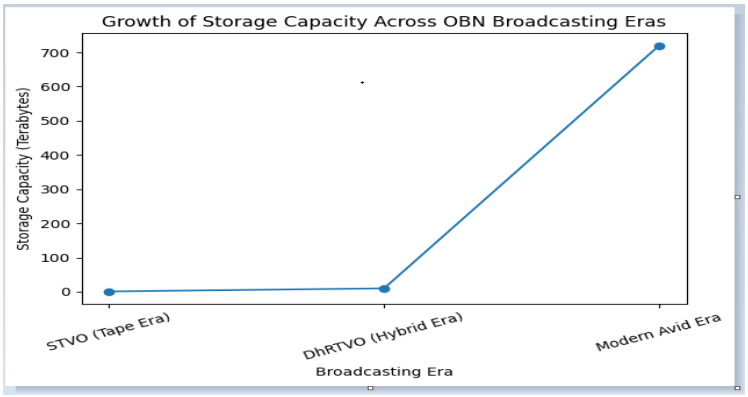
For the first time, OBN shifted from isolated editing rooms to centralized shared storage. Editors no longer worked in silos. Journalists could browse footage instantly. News assembly accelerated.

Instead of handling physical media, teams now manage metadata.

The implementation of the ISIS 5000 system introduced over 220TB of production storage. Later, the transition to Avid NEXIS expanded capacity to 240TB of online storage, supported by 480TB of near-line storage for rapid archive access.

This was not just a storage upgrade it was an architectural transformation.

Storage Architecture Diagram

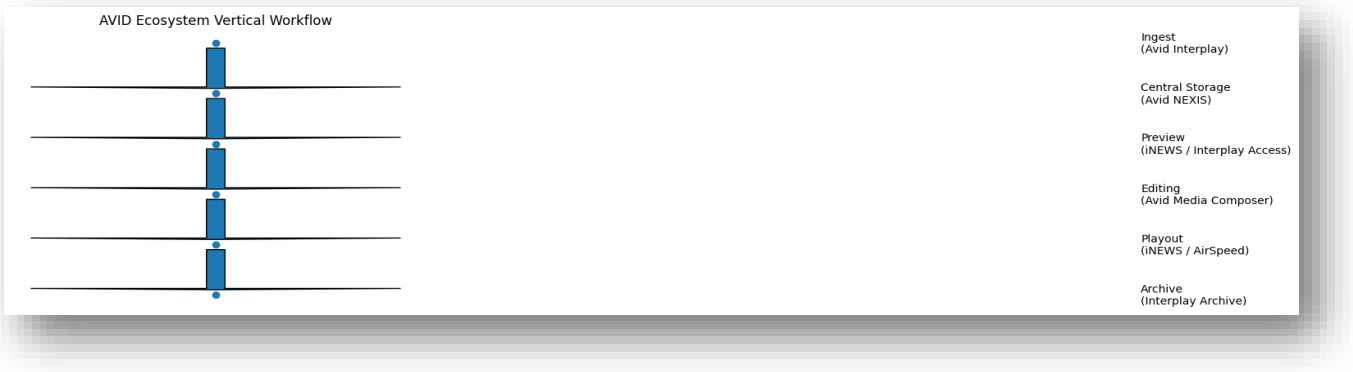


The Intelligent Workflow

Modern OBN production now operates within a fully integrated ecosystem:

- Avid Media Central enables journalists to search, preview, and script from any workstation.
- Avid Media Composer delivers high-end craft editing.
- Avid Interplay manages the media asset database the operational “brain” of the system.

The workflow is streamlined:



High-volume ingest allows up to **eight clips** to be captured simultaneously. Playout is manual through a command server. Archive retrieval is instant and metadata-driven.

What once required hours now takes minutes.

Component	Early Stage	Transitional Stage	Modern Stage
Storage Capacity	Physical tape shelves	Limited PC hard drives	240TB Online + 480TB Near-line
Ingest Speed	1:1 real-time tape capture	Real-time capture to PC	Up to 8 simultaneous ingests
Playout	Manual tape-based	Tape-dependent automation	Fully integrated server-playout
Archive	Physical storage rooms	Manual digital + tape	Easy archive-restore system
Accessibility	Physical presence required	Editing-room based	Network-wide access

Key Benefits of Tapeless Workflow

- Faster Turnaround
- Multi-User Collaboration
- Reduced Transmission Risk
- Secure Central Storage
- Automated Archive & Restore

Operational Area	Improvement Achieved
Turnaround Time	Reduced from hours to minutes
Storage Security	Centralized, controlled environment
Collaboration	Multiple editors access same footage simultaneously
Transmission Reliability	Reduced playout errors
Archive Management	Instant metadata-based search
Scalability	Easy expansion of storage and users

Beyond Studios: A Multi-Platform Ecosystem

Technology at OBN extends far beyond editing rooms.

The network now operates:

- Three television channels (OBN Afan Oromo, OBN Horn of Africa, OBN Gaammee)
- Nine FM radio stations
- OBN Cyber Media for digital engagement
- An Outside Broadcasting (OB) van for live field transmission

Division	Function	Technology Backbone
TV Channels (3)	News, Public Affairs, Youth & Entertainment	Centralized Digital Playout
FM Radio (9)	Regional Audio Broadcasting	Digital Audio Systems
OBN Cyber Media	Social & Online Engagement	Web Platforms & Streaming
OB Van	Live Field Transmission	Satellite/IP Transmission
Studios	Program Production	Avid Media Composer & Shared Storage

This integrated system allows OBN to function as a true media ecosystem television, radio, digital, and remote production operating under one technological framework.
Image of OB Van in field production.

Broadcast Ecosystem Diagram

1. Studios (TV & Radio) COMPLEX
2. OB Vans & Field Production)
3. Project Engineering
4. Satellite Systems
5. OBN Digital Platforms & Apps
6. Post-Production & Quality Control
7. Playout & Delivery
8. IP Broadcast Services
9. RF Transmission
10. Digital Radio
11. Audience Platforms
12. Mobile Connectivity
13. Production Development

Broadcasting as Infrastructure

Modern broadcasting is no longer defined only by cameras and studios.

It is defined by:

- Data management
- Network stability
- Cybersecurity
- Storage architecture
- Workflow optimization

OBN’s new media complex reflects this reality. It is an IT-driven broadcast environment where engineers, journalists, editors, and digital teams collaborate within a centralized technological framework.

The building itself symbolizes integration where infrastructure and creativity meet.

New media complex building.

The Future: Intelligent, Scalable, and Globally Competitive

The next chapter of OBN’s journey is already forming.

Artificial Intelligence will enable automated transcription, translation, and smart archive indexing crucial for multilingual broadcasting.

IP-based signal distribution will replace legacy systems, increasing flexibility and efficiency.

4K and HDR workflows will align production quality with global standards.

Hybrid cloud infrastructure will strengthen disaster recovery and enable remote production models.

Yet technology alone does not ensure excellence.

Continuous professional development remains essential. Skilled engineers and trained journalists are the true drivers of sustainable innovation.

Technology Area	Strategic Goal	Expected Impact
Artificial Intelligence	Automated transcription & indexing	Faster newsroom workflow
IP Broadcasting	Full IP-based signal distribution	Increased flexibility
4K / HDR Production	Upgrade visual quality	Global broadcast standards
Hybrid Cloud	Disaster recovery & scalability	Operational resilience
Professional Training	Continuous skill development	Sustainable innovation

Projected Infrastructure Growth (Storage / Bandwidth / Channels over next 5 years).

A Strategic Commitment

The inauguration of the new media complex represents more than modernization. It reflects a strategic institutional commitment to:

- High-quality journalism
- Operational efficiency
- Technological innovation
- Institutional resilience

From cassette tapes to centralized digital systems, from manual playout to automated transmission, OBN has built a future-ready foundation.

This transformation is not merely technical.

It is structural.
It is cultural.
It is strategic.

And it positions Oromia Broadcasting Network not simply as a broadcaster but as a technologically advanced media institution prepared for the next generation of communication.

Hora bulaa deebanaa!!

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